E-mail Sent to Potential Participants by Stan Morton on 2/12/2003

To Potential Participants:

As a recipient of this email, you have indicated an interest to participate in a round-robin study of isotopic uranium at low concentrations in synthetic urine. The technical specifications of the study are described on the RESL home page http:/inel.gov/resl under Special Projects. Questions concerning the study can be addressed to David McCurdy (508.393.7280), Mary Verwolf (208.526.7001), or Stan Morton (208.526.2186 or 208.520.6609).

The round-robin study will consist of three distinct low-level concentrations of uranium each with three isotopic ratios in a synthetic-urine matrix. Triplicate samples will be provided for each concentration/ratio set for a total of 27 samples. The distribution will include five synthetic-urine matrix blanks for a total of 32 samples. The synthetic-urine matrix will be prepared using the Radiobioassay DOELAP formulation as defined in ANSI N13.30 title. The indigenous uranium has been removed from the matrix salts, thus allowing the isotopic ratios of uranium to be very accurately determined. The three concentrations of uranium will be near 250, 50, and 5 ng / liter of synthetic urine. The round-robin study will be technically challenging, and is designed to evaluate methodologies employing mass-spectrometry, nominally Thermal Ionization Mass Spectrometry (TIMS), Inductively Coupled Plasma Mass Spectrometry (ICP-MS), and Accelerator Mass Spectrometry (AMS).

We encourage your participation, however it should be noted that the preparation costs are substantial and that cost must be passed along to the participants. The number of participants will determine the final cost to the individual participant, but it is anticipated that the final cost to each participant may approach $20,000.00(US). A certificate will be issued by RESL at the termination of the study indicating traceability to the New Brunswick Laboratory at the uncertainty of the reported concentration.

In order to facilitate expediency and reduce any duplication that may occur, we are requesting that you respond to this email by including the name, title and hard copy mailing address for the person who will ultimately be responsible for the obligation of funds at your facility and to whom a hard-copy letter requesting participation will be addressed. We understand that in most cases, that individual will be the recipient of this email, but budgetary requirements demand a single point of contact be identified per participant.

We are indebted to Sandra Wagner at the Los Alamos National Laboratory (LANL) for the initial funding support for this study. We wish to recognize the efforts of David Sill, RESL, in developing the procedure to remove the indigenous uranium from the blank synthetic-matrix salt. We also recognize the analytical work of Dr. Sam Glover at LANL for confirmation of the final concentration of uranium in the blank-matrix salt.

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